FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO

Orion Engineered Carbons LLC

AUTHORIZING THE OPERATION OF

Borger Plant
Carbon Black

LOCATED AT

Hutchinson County, Texas

Latitude 35° 40' 5" Longitude 101° 25' 58"

Regulated Entity Number: RN100209659

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O1661 Issuance Date: July 3, 2013

For the Commission

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General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions:
Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:

    A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.

    B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.

D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.

E. Emission units subject to 40 CFR Part 63, Subparts SS, YY, ZZZZ and DDDDD, as identified in the attached Applicable Requirements Summary table, are subject to 30 TAC Chapter 113, Subchapter C, §§ 113.500, 113.560, 113.1090 and 113.1130, which incorporate the 40 CFR Part 63 Subparts by reference.

2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):

A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements

B. Title 30 TAC § 101.3 (relating to Circumvention)

C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ

D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ

E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)

F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)

G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)

H. Title 30 TAC § 101.221 (relating to Operational Requirements)

I. Title 30 TAC § 101.222 (relating to Demonstrations)

J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)

3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:

A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1 , shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:

(i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(1)(E)

(iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)

(iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the "Applicable Requirements Summary" attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

(1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.

(2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum

required value does not constitute creation of an alternative fuel.

(3) Records of all observations shall be maintained.

(4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(5) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance,

the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

(c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:

(i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)

(iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:

(1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.

(2) Records of all observations shall be maintained.

(3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15

feet, but not more than 0.25 mile, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A)

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

C. For visible emissions from all other sources not specified in 30 TAC § 111.111(a)(1), (4), or (7); the permit holder shall comply with the following requirements:

(i) Title 30 TAC § 111.111(a)(8)(A) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(8)(B)(i) or (ii)

(iii) For a source subject to 30 TAC § 111.111(a)(8)(A), complying with 30 TAC § 111.111(a)(8)(B)(i) or (ii), and capable of producing visible

emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:

(1) An observation of visible emissions from a source which is required to comply with 30 TAC § 111.111(a)(8)(A) shall be conducted at least once during each calendar quarter unless the source is not operating for the entire quarter.

(2) Records of all observations shall be maintained.

(3) Visible emissions observations of sources operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of sources operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each source in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each source during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

    (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(8) and (a)(8)(A)

    (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(8)(B) to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined

to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

D. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.

E. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).

F. Outdoor burning, as stated in 30 TAC § 111.201, shall not be authorized unless the following requirements are satisfied:

(i) Title 30 TAC § 111.205 (relating to Exception for Fire Training)

(ii) Title 30 TAC § 111.207 (relating to Exception for Recreation, Ceremony, Cooking, and Warmth)

(iii) Title 30 TAC § 111.219 (relating to General Requirements for Allowable Outdoor Burning)

(iv) Title 30 TAC § 111.221 (relating to Responsibility for Consequences of Outdoor Burning)

4. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:

A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)

B. Title 40 CFR § 60.8 (relating to Performance Tests)

C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)

D. Title 40 CFR § 60.12 (relating to Circumvention)

E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)

F. Title 40 CFR § 60.14 (relating to Modification)

G. Title 40 CFR § 60.15 (relating to Reconstruction)

H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)

5. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 61, unless otherwise stated in the applicable subpart:

A. Title 40 CFR § 61.05 (relating to Prohibited Activities)

B. Title 40 CFR § 61.07 (relating to Application for Approval of Construction or Modification)

C. Title 40 CFR § 61.09 (relating to Notification of Start-up)

D. Title 40 CFR § 61.10 (relating to Source Reporting and Request Waiver)

E. Title 40 CFR § 61.12 (relating to Compliance with Standards and Maintenance Requirements)

F. Title 40 CFR § 61.13 (relating to Emissions Tests and Waiver of Emission Tests)

G. Title 40 CFR § 61.14 (relating to Monitoring Requirements)

H. Title 40 CFR § 61.15 (relating to Modification)

I. Title 40 CFR § 61.19 (relating to Circumvention)

6. For facilities where total annual benzene quantity from waste is less than 1 megagram per year and subject to emission standards in 40 CFR Part 61, Subpart FF, the permit holder shall comply with the following requirements:

A. Title 40 CFR § 61.355(a)(1)(iii), (a)(2), (a)(5)(i) - (ii), (a)(6), (b), and (c)(1) - (3) (relating to Test Methods, Procedures, and Compliance Provisions), for calculation procedures

B. Title 40 CFR § 61.356(a) (relating to Recordkeeping Requirements)

C. Title 40 CFR § 61.356(b), and (b)(1) (relating to Recordkeeping Requirements)

D. Title 40 CFR § 61.357(a), and (b) (relating to Reporting Requirements)

7. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

Additional Monitoring Requirements

8. The permit holder shall comply with the periodic monitoring requirements as specified in the attached "Periodic Monitoring Summary" upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time specified in the "Periodic Monitoring Summary," for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

New Source Review Authorization Requirements

9. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:

    A. Are incorporated by reference into this permit as applicable requirements

    B. Shall be located with this operating permit

    C. Are not eligible for a permit shield

10. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.

11. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, material safety data sheets (MSDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or

PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144.

A. If applicable, monitoring of control device performance or general work practice standards shall be made in accordance with the TCEQ Periodic Monitoring Guidance document.

B. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

12. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.

13. Use of Discrete Emission Credits to comply with the applicable requirements:

A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:

(i) Title 30 TAC Chapter 115

(ii) Title 30 TAC Chapter 117

(iii) If applicable, offsets for Title 30 TAC Chapter 116

(iv) Temporarily exceed state NSR permit allowables

B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:

(i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)

(ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4

(iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)

(iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122

Protection of Stratospheric Ozone

14. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone.

    A. Any on site servicing, maintenance, and repair on refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants or non-exempt substitutes shall be conducted in accordance with 40 CFR Part 82, Subpart F. Permit holders shall ensure that repairs on or refrigerant removal from refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart F.

Permit Location

15. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Permit Shield (30 TAC § 122.148)

16. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Unit Summary 15

Applicable Requirements Summary 18

Note: A "none" entry may be noted for some emission sources in this permit's "Applicable Requirements Summary" under the heading of "Monitoring and Testing Requirements" and/or "Recordkeeping Requirements" and/or "Reporting Requirements." Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
E-6B	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111E-6B	30 TAC Chapter 111, Visible Emissions	No changing attributes.
E-6B	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63SS-E6B	40 CFR Part 63, Subpart SS	No changing attributes.
GRP-VENT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	E-50R, E-51R	R1111-GRP-VENT	30 TAC Chapter 111, Visible Emissions	No changing attributes.
E-10FL	FLARES	N/A	R1111-E-10FL	30 TAC Chapter 111, Visible Emissions	No changing attributes.
E-10FL	FLARES	N/A	63A-E-10FL	40 CFR Part 63, Subpart A	No changing attributes.
E-10FL	FLARES	N/A	63SS-E-10FL	40 CFR Part 63, Subpart SS	No changing attributes.
E-20FL	FLARES	N/A	R1111-E-20FL	30 TAC Chapter 111, Visible Emissions	No changing attributes.
E-20FL	FLARES	N/A	63A-E-20FL	40 CFR Part 63, Subpart A	No changing attributes.
E-20FL	FLARES	N/A	63SS-E-20FL	40 CFR Part 63, Subpart SS	No changing attributes.
E-40FL	FLARES	N/A	R1111-E-40FL	30 TAC Chapter 111, Visible Emissions	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
E-40FL	FLARES	N/A	63A-E-40FL	40 CFR Part 63, Subpart A	No changing attributes.
E-40FL	FLARES	N/A	63SS-E-40FL	40 CFR Part 63, Subpart SS	No changing attributes.
E-50DH	FLARES	N/A	R1111-E-50DH	30 TAC Chapter 111, Visible Emissions	No changing attributes.
TGHEADER	CLOSED VENT SYSTEM	N/A	63SS-TGHDR	40 CFR Part 63, Subpart SS	No changing attributes.
E-100H	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-101H	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-10D	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-11D	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-1B	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-20D	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-21D	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-40D	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
E-41D	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-5B	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
INERT GEN	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
GRP-REACTOR	REACTOR	P-11B, P-21B, P-41B	63YY-P11B	40 CFR Part 63, Subpart YY	No changing attributes.
B1-ENG	SRIC ENGINES	N/A	60IIII-01	40 CFR Part 60, Subpart IIII	No changing attributes.
B1-ENG	SRIC ENGINES	N/A	63ZZZZ-01	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
B2-ENG	SRIC ENGINES	N/A	63ZZZZ-01	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
EMER-GEN	SRIC ENGINES	N/A	60JJJJ-01	40 CFR Part 60, Subpart JJJJ	No changing attributes.
EMER-GEN	SRIC ENGINES	N/A	63ZZZZ-02	40 CFR Part 63, Subpart ZZZZ	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
E-6B	EP	R1111E-6B	OPACITY	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
E-6B	CD	63SS-E6B	112(B) HAPS	40 CFR Part 63, Subpart SS	[G]§ 63.988(a)	Owners or operators using incinerators, boilers, or process heaters to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of this section.	None	[G]§ 63.988(d)(3)	§ 63.997(c)(3) § 63.999(c)(1)
GRP-VENT	EP	R1111-GRP-VENT	OPACITY	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
E-10FL	EU	R1111-E-10FL	OPACITY	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for emission event emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
E-10FL	CD	63A-E-10FL	OPACITY	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(i)(A) § 63.11(b)(6)(i)(B) § 63.11(b)(7)(i)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None
E-10FL	CD	63SS-E-10FL	112B(HAPS)	40 CFR Part 63, Subpart SS	§ 63.987(a) § 63.982(a) § 63.982(b)	Flares subject to this subpart shall meet the performance requirements in 40 CFR 63.11(b) (General Provisions).	§ 63.987(b)(1) § 63.987(b)(3)(i) § 63.987(b)(3)(ii) § 63.987(b)(3)(iii) § 63.987(b)(3)(iv) § 63.987(c) § 63.997(a) [G]§ 63.997(b) § 63.997(c)(1)(iii)	[G]§ 63.998(a)(1) [G]§ 63.998(d)(3) § 63.998(d)(5)	§ 63.997(c)(3) [G]§ 63.999(a)(1) [G]§ 63.999(a)(2) § 63.999(c)(1) § 63.999(c)(3)
E-20FL	EU	R1111-E-20FL	OPACITY	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for emission event emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
E-20FL	CD	63A-E-20FL	OPACITY	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(i)(A) § 63.11(b)(6)(i)(B) § 63.11(b)(7)(i)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None
E-20FL	CD	63SS-E-20FL	112(B)HAPS	40 CFR Part 63, Subpart SS	§ 63.987(a) § 63.982(a) § 63.982(b)	Flares subject to this subpart shall meet the performance requirements in 40 CFR 63.11(b) (General Provisions).	§ 63.987(b)(1) § 63.987(b)(3)(i) § 63.987(b)(3)(ii) § 63.987(b)(3)(iii) § 63.987(b)(3)(iv) § 63.987(c) § 63.997(a) [G]§ 63.997(b) § 63.997(c)(1)(iii)	[G]§ 63.998(a)(1) [G]§ 63.998(d)(3) § 63.998(d)(5)	§ 63.997(c)(3) [G]§ 63.999(a)(1) [G]§ 63.999(a)(2) § 63.999(c)(1) § 63.999(c)(3)
E-40FL	EU	R1111-E-40FL	OPACITY	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for emission event emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
E-40FL	CD	63A-E-40FL	OPACITY	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(i)(A) § 63.11(b)(6)(i)(B) § 63.11(b)(7)(i)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
E-40FL	CD	63SS-E-40FL	112(B)HAPS	40 CFR Part 63, Subpart SS	§ 63.987(a) § 63.982(a) § 63.982(b)	Flares subject to this subpart shall meet the performance requirements in 40 CFR 63.11(b) (General Provisions).	§ 63.987(b)(1) § 63.987(b)(3)(i) § 63.987(b)(3)(ii) § 63.987(b)(3)(iii) § 63.987(b)(3)(iv) § 63.987(c) § 63.997(a) [G]§ 63.997(b) § 63.997(c)(1)(iii)	[G]§ 63.998(a)(1) [G]§ 63.998(d)(3) § 63.998(d)(5)	§ 63.997(c)(3) [G]§ 63.999(a)(1) [G]§ 63.999(a)(2) § 63.999(c)(1) § 63.999(c)(3)
E-50DH	EU	R1111-E-50DH	OPACITY	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for emission event emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
TGHEADER	EU	63SS-TGHDR	112(B)HAPS	40 CFR Part 63, Subpart SS	§ 63.982(b) § 63.982(c)(2) § 63.983(a)(1) § 63.983(a)(2) [G]§ 63.983(d)	Owners or operators that vent emissions through a closed vent system to a flare shall meet the requirements in §63.983 for closed vent systems and §63.987 for flares.	[G]§ 63.983(b)(1)(i) [G]§ 63.983(b)(2) [G]§ 63.983(b)(3) [G]§ 63.983(c)(1) [G]§ 63.983(c)(2) [G]§ 63.983(c)(3)	§ 63.998(d)(1)(i) [G]§ 63.998(d)(1)(iii) § 63.998(d)(1)(iv)	§ 63.999(c)(1) § 63.999(c)(2)(i)
E-100H	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
E-101H	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
E-10D	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
E-11D	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
E-1B	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
E-20D	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
E-21D	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
E-40D	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
E-41D	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
E-5B	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
INERT GEN	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
GRP-REACTOR	EU	63YY-P11B	112B(HAPS)	40 CFR Part 63, Subpart YY	§ 63.1103(f)(3)(i)-Tbl8(a)(1)(ii) § 63.1100(a) § 63.1100(b) § 63.1100(d)(1) § 63.1102(a)(2)(i) § 63.1103(f)(3)(i) § 63.1108(a)(5) § 63.1108(a)(6) § 63.1108(a)(7) § 63.1108(b)(3) [G]§ 63.1108(b)(4) [G]§ 63.1108(b)(5) § 63.1108(c) [G]§ 63.1108(d) § 63.1111(a)	Reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of §63.982(a)(2).	None	§ 63.1109(a) § 63.1109(b) § 63.1109(c) § 63.1109(d)	§ 63.1110(a)(2) § 63.1110(a)(4) § 63.1110(a)(5) § 63.1110(a)(6) § 63.1110(a)(7) § 63.1110(c)(1) § 63.1110(c)(6) § 63.1110(c)(7) [G]§ 63.1110(d) [G]§ 63.1110(e) [G]§ 63.1110(f) [G]§ 63.1110(g) § 63.1110(h)(1) § 63.1110(h)(7) [G]§ 63.1111(b)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
B1-ENG	EU	60IIII-01	NMHC + NOX	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 60.4202(a)(1)(ii) § 60.4202(a)(1)(ii)Tbl2 § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) § 60.4211(f) § 60.4218	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power less than 37 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with an NMHC+NOx emission limit of 7.5 g/KW-hr, as stated in 40 CFR 60.4202(a)(1)(i)-(ii) and 40 CFR 89.112(a) and Table 2 to this subpart.	None	None	None
B1-ENG	EU	60IIII-01	CO	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 60.4202(a)(1)(ii) § 60.4202(a)(1)(ii)Tbl2 § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) § 60.4211(f) § 60.4218	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 19 KW and less than 37 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a CO emission limit of 5.5 g/KW-hr, as stated in 40 CFR 60.4202(a)(1)(i)-(ii) and 40 CFR 89.112(a) and Table 2 to this subpart.	None	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
B1-ENG	EU	60IIII-01	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 60.4202(a)(1)(ii) § 60.4202(a)(1)(ii)Tbl2 § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) § 60.4211(f) § 60.4218	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 19 KW and less than 37 KW and a displacement of less than 10 liters per cylinder and is a 2008 model year and later must comply with a PM emission limit of 0.30 g/KW-hr, as stated in 40 CFR 60.4202(a)(1)(ii) and Table 2 to this subpart.	None	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
B1-ENG	EU	60IIII-01	OPACITY	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 1039.105(b)(1)-(3) § 60.4202(a)(1)(ii) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) § 60.4211(f) § 60.4218	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power less than or equal to 2237 KW and is a 2007 model year and later and a displacement of less than 10 liters per cylinder must comply with the following opacity emission limits: 20% during the acceleration mode, 15% during the lugging mode, and 50% during the peaks in either the acceleration or lugging modes as stated in 40 CFR 60.4202(a)(1)-(2) and 40 CFR 89.113(a)(1)-(3) and 40 CFR 1	None	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
B1-ENG	EU	63ZZZZ-01	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	A new/reconstructed stationary RICE located at an area source, or located at a major source of HAP emissions and is a spark ignition (SI) 2SLB < 500 HP, SI 4 SLB < 250 HP, or 4SRB, compression ignition (CI), emergency or limited use, or which combusts landfill or digester gas at > 10% of the gross heat input < 500 HP must meet the requirements of this part by meeting the requirements of 40 CFR Part 60, Subpart IIII, for CI engines or 40 CFR Part 60, Subpart JJJJ, for SI engines.	None	None	None
B2-ENG	EU	63ZZZZ-01	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6602-Table2c.1 § 63.6595(a)(1) § 63.6605(a) § 63.6605(b) § 63.6625(e) § 63.6625(h) § 63.6625(i) § 63.6640(b) [G]§ 63.6640(f)(1)	For each existing emergency stationary CI RICE and black start stationary CI RICE, located at a major source, you must comply with the requirements as specified in Table 2c.1.a-c.	§ 63.6625(f) § 63.6625(i) § 63.6640(a) § 63.6640(a)-Table6.9.a.i § 63.6640(a)-Table6.9.a.ii § 63.6640(b)	§ 63.6625(i) § 63.6655(a) § 63.6655(a)(1) § 63.6655(a)(2) § 63.6655(a)(4) § 63.6655(a)(5) § 63.6655(d) § 63.6655(e) § 63.6655(f) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6640(b) § 63.6640(e) § 63.6650(f)

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Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
EMER-GEN	EU	60JJJJ-01	CO	40 CFR Part 60, Subpart JJJJ	§ 60.4233(d)-Table1 § 60.4234 § 60.4243(b) § 60.4243(b)(1) § 60.4243(d) § 60.4243(g) § 60.4246	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than or equal to 130 HP and were manufactured on or after 01/01/2009 must comply with a CO emission limit of 4.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(b)	§ 60.4243(a)(1) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(3) § 60.4245(b)	None
EMER-GEN	EU	60JJJJ-01	NO_X	40 CFR Part 60, Subpart JJJJ	§ 60.4233(d)-Table1 § 60.4234 § 60.4243(b) § 60.4243(b)(1) § 60.4243(d) § 60.4243(g) § 60.4246	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than or equal to 130 HP and were manufactured on or after 01/01/2009 must comply with a NOx emission limit of 2.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(b)	§ 60.4243(a)(1) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(3) § 60.4245(b)	None
EMER-GEN	EU	60JJJJ-01	VOC	40 CFR Part 60, Subpart JJJJ	§ 60.4233(d)-Table1 § 60.4234 § 60.4243(b) § 60.4243(b)(1) § 60.4243(d) § 60.4243(g) § 60.4246	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than or equal to 130 HP and were manufactured on or after 01/01/2009 must comply with a VOC emission limit of 1.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(b)	§ 60.4243(a)(1) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(3) § 60.4245(b)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
EMER-GEN	EU	63ZZZZ-02	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	A new/reconstructed stationary RICE located at an area source, or located at a major source of HAP emissions and is a spark ignition (SI) 2SLB < 500 HP, SI 4 SLB < 250 HP, or 4SRB, compression ignition (CI), emergency or limited use, or which combusts landfill or digester gas at > 10% of the gross heat input < 500 HP must meet the requirements of this part by meeting the requirements of 40 CFR Part 60, Subpart IIII, for CI engines or 40 CFR Part 60, Subpart JJJJ, for SI engines.	None	None	None

Additional Monitoring Requirements

Periodic Monitoring Summary..... 33

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: E-6B	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111E-6B
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: Once per week	
Averaging Period: n/a	
Deviation Limit: Visible Emissions or 15% Opacity	
Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is an opacity above the corresponding opacity limit, the permit holder shall report a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRP-VENT	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-GRP-VENT
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: Once per week	
Averaging Period: n/a	
Deviation Limit: Visible Emissions or 15% Opacity	
Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is an opacity above the corresponding opacity limit, the permit holder shall report a deviation.	

Permit Shield

Permit Shield 36

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
E-1B	N/A	40 CFR Part 60, Subpart D	Heat input less than 250 MMBtu/hr
E-1B	N/A	40 CFR Part 60, Subpart Da	Boiler is not an electric utility steam generating unit
E-1B	N/A	40 CFR Part 60, Subpart Db	Boiler maximum rated capacity less than 100 MMBtu/hr
E-1B	N/A	40 CFR Part 60, Subpart Dc	Boiler maximum rated capacity less than 100 MMBtu/hr
GRP-BOILER	E-6B	40 CFR Part 60, Subpart D	Boiler does not burn fossil fuel
GRP-BOILER	E-6B	40 CFR Part 60, Subpart Da	Boiler is not an electric utility steam generating unit
GRP-BOILER	E-6B	40 CFR Part 60, Subpart Db	Boiler constructed/modified/reconstructed before 6/19/1984
GRP-BOILER	E-6B	40 CFR Part 60, Subpart Dc	Boiler constructed/modified/reconstructed before 6/9/1989
GRP-VENT	E-50R, E-51R	40 CFR Part 63, Subpart YY	The HAP concentration of the emission stream is less than 260 parts per million by volume.
E-50DH	N/A	40 CFR Part 60, Subpart A	Dehumidifier not used to meet requirements of 40 CFR Part 60

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
E-50DH	N/A	40 CFR Part 61, Subpart A	Dehumidifier not used to meet requirements of 40 CFR Part 61
E-50DH	N/A	40 CFR Part 63, Subpart A	Dehumidifier not used to meet requirements of 40 CFR Part 63
E-50DH	N/A	40 CFR Part 63, Subpart SS	Flare does not combust tailgas generated from reactor processes subject to MACT YY. The flare is not subject to MACT SS since it is only applicable when another subpart references the use of MACT SS for such air emission control.
P-50BT	N/A	40 CFR Part 63, Subpart YY	HAP concentration of emission stream less than 260 ppmv
P-51BT	N/A	40 CFR Part 63, Subpart YY	HAP concentration of emission stream less than 260 ppmv
E-5B	N/A	40 CFR Part 60, Subpart D	Boiler does not burn fossil fuel
E-5B	N/A	40 CFR Part 60, Subpart Da	Boiler is not an electric utility steam generating unit
E-5B	N/A	40 CFR Part 60, Subpart Db	Boiler constructed/modified/reconstructed before 06/19/1984

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
E-5B	N/A	40 CFR Part 60, Subpart Dc	Boiler constructed/modified/reconstructed before 06/09/1989
E-5B	N/A	40 CFR Part 63, Subpart SS	Boiler does not combust tail gas generated from reactor processes subject to MACT YY. The boiler is not subject to MACT SS since it is only applicable when another subpart references the use of MACT SS for such air emission control
GRP-REACTOR	P-11B, P-21B, P-41B	40 CFR Part 60, Subpart III	Facility does not produce any chemicals listed in 40 CFR 60.617 as product, co-product, by-product, or intermediate
GRP-REACTOR	P-11B, P-21B, P-41B	40 CFR Part 60, Subpart RRR	Facility does not produce any chemicals listed in 40 CFR 60.707 as product, co-product, by-product, or intermediate
B2-ENG	N/A	40 CFR Part 60, Subpart IIII	Stationary CI that commenced construction prior to July 11, 2005.
E-10T	N/A	40 CFR Part 60, Subpart K	Vessel constructed/modified/reconstructed before 6/11/1973
E-11T	N/A	40 CFR Part 60, Subpart K	Vessel constructed/modified/reconstructed before 6/11/1973

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
E-12T	N/A	40 CFR Part 60, Subpart K	Vessel capacity less than 40,000 gallons
E-12T	N/A	40 CFR Part 60, Subpart Ka	Vessel capacity less than 40,000 gallons
E-12T	N/A	40 CFR Part 60, Subpart Kb	Vessel constructed/modified/reconstructed before 7/23/1984
E-13T	N/A	40 CFR Part 60, Subpart K	Vessel capacity less than 40,000 gallons
E-13T	N/A	40 CFR Part 60, Subpart Ka	Vessel capacity less than 40,000 gallons
E-13T	N/A	40 CFR Part 60, Subpart Kb	Vessel constructed/modified/reconstructed before 7/23/1984
E-22T	N/A	40 CFR Part 60, Subpart K	Tank storage capacity is less than 40,000 gallons
E-22T	N/A	40 CFR Part 60, Subpart Ka	Vessel capacity less than 40,000 gallons
E-22T	N/A	40 CFR Part 60, Subpart Kb	Vessel capacity less than 75 cubic meters (19,800 gallons)
E-BINT	N/A	40 CFR Part 60, Subpart K	Vessel capacity less than 40,000 gallons
E-BINT	N/A	40 CFR Part 60, Subpart Ka	Vessel capacity less than 40,000 gallons
E-BINT	N/A	40 CFR Part 60, Subpart Kb	Vessel constructed/modified/reconstructed before 7/23/1984

New Source Review Authorization References

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New Source Review Authorization References by Emission Unit..... 43

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Prevention of Significant Deterioration (PSD) Permits	
PSD Permit No.: PSDTX416M1	Issuance Date: 03/24/2015
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 8780	Issuance Date: 03/24/2015
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.102	Version No./Date: 09/04/2000
Number: 106.103	Version No./Date: 09/04/2000
Number: 106.122	Version No./Date: 09/04/2000
Number: 106.123	Version No./Date: 09/04/2000
Number: 106.183	Version No./Date: 09/04/2000
Number: 106.227	Version No./Date: 09/04/2000
Number: 106.244	Version No./Date: 09/04/2000
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.264	Version No./Date: 09/04/2000
Number: 106.265	Version No./Date: 09/04/2000
Number: 106.266	Version No./Date: 09/04/2000
Number: 106.371	Version No./Date: 09/04/2000
Number: 106.412	Version No./Date: 09/04/2000
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.472	Version No./Date: 03/14/1997
Number: 106.473	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000
Number: 106.532	Version No./Date: 09/04/2000
Number: 7	Version No./Date: 09/12/1989
Number: 70	Version No./Date: 09/12/1989

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Number: 111	Version No./Date: 09/12/1989

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
B1-ENG	B1 EMERGENCY AIR BLOWER/ENGINE	106.511/09/04/2000
B2-ENG	B2 EMERGENCY AIR BLOWER/ENGINE	106.511/09/04/2000
E-100H	MAIN OIL PREHEATER	007/09/12/1989
E-101H	SECONDARY OIL PREHEATER	007/09/12/1989
E-10D	NORTH B1 DRYER	8780, PSDTX416M1
E-10FL	B-1 FLARE	8780, PSDTX416M1
E-10T	OIL STORAGE TANK #1	8780, PSDTX416M1
E-11D	SOUTH B1 DRYER	8780, PSDTX416M1
E-11T	OIL STORAGE TANK #2	8780, PSDTX416M1
E-12T	EAST DAY TANK	8780, PSDTX416M1
E-13T	WEST DAY TANK	8780, PSDTX416M1
E-1B	FURNACE BOILER	007/09/12/1989
E-20D	NORTH B2 DRYER	8780, PSDTX416M1
E-20FL	B-2 FLARE	8780, PSDTX416M1
E-21D	SOUTH B2 DRYER	8780, PSDTX416M1
E-22T	DAY TANK #5	8780, PSDTX416M1
E-40D	NORTH B4 DRYER	8780, PSDTX416M1
E-40FL	B-4 FLARE	8780, PSDTX416M1

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
E-41D	SOUTH B4 DRYER	8780, PSDTX416M1
E-50DH	THERMAL DEHUMIDIFIER	8780, PSDTX416M1
E-50R	T-1 REACTOR NORTH STACK	8780, PSDTX416M1
E-51R	T-1 REACTOR SOUTH STACK	8780, PSDTX416M1
E-5B	THERMAL BOILER	8780, PSDTX416M1
E-6B	WASTE HEAT BOILER	8780, PSDTX416M1
E-6B	WASTE HEAT BOILER STACK	8780, PSDTX416M1
E-BINT	BINDER TANK	106.472/03/14/1997
EMER-GEN	EMERGENCY GENERATOR	106.511/09/04/2000
FURN-FUG	FURNACE AREA FUGITIVES	8780, PSDTX416M1
INERT GEN	INERT GAS GENERATOR	007/09/12/1989
OIL-FUG	OIL STORAGE FUGITIVES	8780, PSDTX416M1
OIL-FUG2	RAILCAR UNLOADING	8780, PSDTX416M1
P-11B	B-1 REACTOR	8780, PSDTX416M1
P-21B	B-2 REACTOR	8780, PSDTX416M1
P-41B	B-4 REACTOR	8780, PSDTX416M1
P-50BT	T-1 REACTOR	8780, PSDTX416M1
P-51BT	T-2 REACTOR	8780, PSDTX416M1

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
TGHEADER	TAIL GAS HEADER	8780, PSDTX416M1

Appendix A

Acronym List 47

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM ..... actual cubic feet per minute
AMOC ..... alternate means of control
ARP ..... Acid Rain Program
ASTM ..... American Society of Testing and Materials
B/PA ..... Beaumont/Port Arthur (nonattainment area)
CAM ..... Compliance Assurance Monitoring
CD ..... control device
COMS ..... continuous opacity monitoring system
CVS ..... closed-vent system
D/FW ..... Dallas/Fort Worth (nonattainment area)
DR ..... Designated Representative
ElP ..... El Paso (nonattainment area)
EP ..... emission point
EPA ..... U.S. Environmental Protection Agency
EU ..... emission unit
FCAA Amendments ..... Federal Clean Air Act Amendments
FOP ..... federal operating permit
GF ..... grandfathered
gr/100 scf ..... grains per 100 standard cubic feet
HAP ..... hazardous air pollutant
H/G/B ..... Houston/Galveston/Brazoria (nonattainment area)
H_2S ..... hydrogen sulfide
ID No. ..... identification number
lb/hr ..... pound(s) per hour
MMBtu/hr ..... Million British thermal units per hour
MRRT ..... monitoring, recordkeeping, reporting, and testing
NA ..... nonattainment
N/A ..... not applicable
NADB ..... National Allowance Data Base
NO_x ..... nitrogen oxides
NSPS ..... New Source Performance Standard (40 CFR Part 60)
NSR ..... New Source Review
ORIS ..... Office of Regulatory Information Systems
Pb ..... lead
PBR ..... Permit By Rule
PM ..... particulate matter
ppmv ..... parts per million by volume
PSD ..... prevention of significant deterioration
RO ..... Responsible Official
SO_2 ..... sulfur dioxide
TCEQ ..... Texas Commission on Environmental Quality
TSP ..... total suspended particulate
TVP ..... true vapor pressure
U.S.C. ..... United States Code
VOC ..... volatile organic compound

Appendix B

Major NSR Summary Table 49

Major NSR Summary Table

Permit Number: 8780 and PSDTX416M1 (Issuance Date: 03/24/2015)							
Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates**		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lbs/hour	**tpy (4)**	**Special Condition**	**Special Condition**	**Special Condition**
E-6B	Waste Heat Boiler	PM	24.34	*(5)*	4, 7, 8, 12, 13, 14, 15	2, 4, 7, 8, 10, 12, 13, 14, 15, 17, 18	15
		SO_2	2073.6	*(5)*	4, 5, 7, 13, 14, 15	2, 4, 5, 7, 13, 14, 15, 17, 18	15
		NO_X	169.78	*(5)*	4, 7, 13, 14, 15	2,4,7,13,14,15,17, 18	15
		VOC (6)	24.89	*(5)*	4, 7, 13	4, 7, 13, 17, 18	
		CO	853.69	*(5)*	4, 7, 13, 14, 15	2,4,7,13,14,15,17,18	15
		H_2S	18.73	*(5)*	4, 5, 7, 13	2, 4, 5, 7, 13, 17, 18	
		COS	4.94	*(5)*	3, 4, 5, 7, 13	2, 3, 4, 5, 7, 13, 17, 18	3
		CS_2	7.39	*(5)*	3, 4, 5, 7, 13	2, 3, 4, 5, 7, 13, 17, 18	3
		HCN	1.54	*(5)*	3, 4, 7, 13	2, 3, 4, 7, 13, 17, 18	3
		Bz	0.83	*(5)*	3, 4, 7, 13	2, 3, 4, 7, 13, 17, 18	3
		Al	0.67	*(5)*	4, 7, 13	2, 4, 7, 13, 17, 18	
		Bz	0.83	(5)	3, 4, 7, 13	2, 3, 4, 7, 13, 17, 18	3
		Al	0.67	(5)	4, 7, 13	2, 4, 7, 13, 17, 18	
		Cl	0.87	*(5)*	4, 7, 13	2, 4, 7, 13, 17, 18	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	tpy (4)	Special Condition	Special Condition	Special Condition
E-10FL	Unit 1 Reactor /Flare *(8)*	PM	9.13	*(5)*	4, 7, 8, 11, 12, 13, 16	2, 4, 7, 8, 10, 11 12, 13, 16, 17, 18	
		SO_2	777.6	*(5)*	4, 5, 7, 11, 13, 16	2, 4, 5, 7, 11, 13, 16, 17, 18	
		NO_X	62.82	*(5)*	4, 7, 11, 13, 16	2,4,7,11,13,16,17,18	
		VOC *(6)*	9.33	*(5)*	4, 7, 11, 13, 16	2,4,7,11,13,16,17,18	
		CO	320.13	*(5)*	4, 7, 11, 13, 16	2,4,7,11,13,16,17,18	
		H_2S	7.02	*(5)*	4, 5, 7, 11, 13	2,4,5,7,11,13,17,18	
		COS	1.85	*(5)*	3, 4, 5, 7, 11, 13	2,3,4,5,7,11,13,17,18	3

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	tpy (4)	Special Condition	Special Condition	Special Condition
E-10FL *(continued)*	Unit 1 Reactor /Flare *(8)* *(continued)*	CS_2	2.77	*(5)*	3, 4, 5, 7, 11, 13	2, 3, 4, 5, 7,11, 13, 17, 18	3
		HCN	0.58	*(5)*	3, 4, 7, 11, 13	2, 3, 4, 5, 7, 11, 13, 17, 18	3
		Bz	0.31	*(5)*	3, 4, 7, 11, 13	2, 3, 4, 7, 11, 13, 17, 18	3
		Al	0.25	*(5)*	4, 7, 11, 13	2, 4, 7, 11, 13, 17, 18	
		Cl	0.33	*(5)*	4, 7, 11, 13	2, 4, 7, 11, 13, 17, 18	
E-20FL	Unit 2 Reactor /Flare *(8)*	PM	9.13	*(5)*	4, 7, 8, 11, 12, 13, 16	2, 4, 7, 8, 10, 11 12, 13, 16, 17, 18	
		SO_2	777.6	*(5)*	4, 5, 7, 11, 13, 16	2, 4, 5, 7, 11, 13, 16, 17, 18	
		NO_X	62.82	*(5)*	4, 7, 11, 13, 16	2, 4, 7, 11, 13, 16, 17, 18	
		VOC *(6)*	9.33	*(5)*	4, 7, 11, 13, 16	2, 4, 7, 11, 13, 16, 17, 18	
		CO	320.13	*(5)*	4, 7, 11, 13, 16	2, 4, 7, 11, 13, 16, 17, 18	
		H_2S	7.02	*(5)*	4, 5, 7, 11, 13	2, 4, 5, 7, 11, 13, 17, 18	
		COS	1.85	*(5)*	3, 4, 5, 7, 11, 13	2, 3, 4, 5, 7, 11, 13, 17, 18	3
		CS_2	2.77	*(5)*	3, 4, 5, 7, 11, 13	2, 3, 4, 5, 7, 11, 13, 17, 18	3

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	tpy (4)	Special Condition	Special Condition	Special Condition
E-20FL (continued)	Unit 2 Reactor /Flare *(8) (continued)*	HCN	0.58	*(5)*	3, 4, 7, 11, 13	2, 3, 4, 7, 11, 13, 17, 18	3
		Bz	0.31	*(5)*	3, 4, 7, 11, 13	2, 3, 4, 7, 11, 13, 17, 18	3
		Al	0.25	*(5)*	4, 7, 11, 13	2, 4, 7, 11, 13, 17, 18	
		Cl	0.33	*(5)*	4, 7, 11, 13	2, 4, 7, 11, 13, 17, 18	
E-40FL	Unit 4 Reactor /Flare (8)	PM	9.13	*(5)*	4, 7, 8, 11, 12, 13, 16	2, 4, 7, 8, 10, 12, 13, 16, 17, 18	
		SO_2	777.6	*(5)*	4, 5, 7, 11, 13, 16	2, 4, 5, 7, 11, 13, 16, 17, 18	
		NO_X	62.82	*(5)*	4, 7, 11, 13, 16	2, 4, 7, 11, 13, 16, 17, 18	
		VOC(6)	9.33	*(5)*	4, 7, 11, 13, 16	2, 4, 7, 11, 13, 16, 17, 18	
		CO	320.13	*(5)*	4, 7, 11, 13, 16	2, 4, 7, 11, 13, 16, 17, 18	
		H_2S	7.02	*(5)*	4, 5, 7, 11, 13	2, 4, 5, 7, 11, 13, 17, 18	
		COS	1.85	*(5)*	3, 4, 5, 7, 11, 13,	2, 3, 4, 5, 7, 11, 13, 17, 18	3
		CS_2	2.77	*(5)*	3, 4, 5, 7, 11, 13	2, 3, 4, 5, 7, 11, 13, 17, 18	3
		HCN	0.58	*(5)*	3, 4, 7, 11, 13	2, 3, 4, 7, 11, 13, 17, 18	3
		Bz	0.31	*(5)*	3, 4, 7, 11, 13	2, 3, 4, 7, 11, 13, 17, 18	3

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	tpy (4)	Special Condition	Special Condition	Special Condition
E-40FL (continued)	Unit 4 Reactor /Flare (8) (continued)	Al	0.25	*(5)*	4, 7, 11, 13	2, 4, 7, 11, 13, 17, 18	
		Cl	0.33	*(5)*	4, 7, 11, 13	2, 4, 7, 11, 13, 17, 18	
(5)	Combined Sources (5)	PM		*78.44*	4, 7, 8, 11, 12, 13, 16,	2, 4, 7, 8, 10, 11, 12, 13, 16, 17, 18	
		SO_2		*8476.88*	4, 5, 7, 11, 13, 16	2, 4, 5, 7, 11, 13, 16, 17, 18	
		NO_X		*688.14*	4, 7, 11, 13, 16	2, 4, 7, 11, 13, 16, 17, 18	
		VOC(6)		*101.07*	4, 7, 11, 13, 16	2, 4, 7, 11, 13, 16, 17, 18	
		CO			4, 7, 11, 13, 16	2. 4, 7, 11, 13, 16, 17, 18	
		H_2S		*76.56*	4, 5, 7, 11, 13	2, 4, 5, 7, 11, 13, 17, 18	
		COS		*20.19*	3, 4, 5, 7, 11, 13	2, 3, 4, 5, 7, 11, 13, 17, 18	3
		CS_2		*30.2*	3, 4, 5, 7, 11, 13	2, 3, 4, 5, 7, 11, 13, 17, 18	3
		HCN		*6.27*	3, 4, 7, 11, 13	2, 3, 4, 7, 11, 13, 17, 18	3
		Bz		*3.03*	3, 4, 7, 11, 13	2, 3, 4, 7, 11, 13, 17, 18	3
		Al		*1.93*	4, 7, 11, 13	2, 4, 7, 11, 13, 17, 18	
		Cl		*2.5*	4, 7, 11, 13	2, 4, 7, 11, 13, 17, 18	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	tpy (4)	Special Condition	Special Condition	Special Condition
E-10D/E-11D	B-1 Dryers	PM	0.3	*1.3*	4, 7, 12, 13,16	2, 4, 7, 12, 13, 16, 17, 18	
		SO_2	0.02	*0.1*	4, 7, 13, 16	2, 4, 7, 13, 16, 17, 18	
		NO_X	3.8	*16.64*	4, 7, 13, 16	2, 4, 7, 13, 16, 17, 18	
		VOC	0.21	*0.94*	4, 7, 13, 16	2, 4, 7, 13, 16, 17, 18	
		CO	3.27	*14.34*	4, 7, 13, 16	2, 4, 7, 13, 16, 17, 18	
E-20D/E-21D	B-2 Dryers	PM	0.3	*1.3*	4, 7, 12, 13, 16	2, 4, 7, 12, 13, 16, 17, 18	
		SO_2	0.02	*0.1*	4, 7, 13, 16	2, 4, 7, 13, 16, 17, 18	
		NO_X	3.8	*16.64*	4, 7, 13, 16	2, 4, 7, 13, 16, 17, 18	
		VOC	0.21	*0.94*	4, 7, 13, 16	2, 4, 7, 13, 16, 17, 18	
		CO	3.27	*14.34*	4, 7, 13, 16	2, 4, 7, 13, 16, 17, 18	
E-40D/E-41D	B-4 Dryers	PM	0.3	*1.3*	4, 7, 12, 13, 16	2, 4, 7, 12, 13, 16, 17, 18	
		SO_2	0.02	*0.1*	4, 7, 13, 16	2, 4, 7, 13, 16, 17, 18	
		NO_X	3.8	*16.64*	4, 7, 13, 16	2, 4, 7, 13, 16, 17, 18	
		VOC	0.21	*0.94*	4, 7, 13, 16	2, 4, 7, 13, 16, 17, 18	
		CO	3.27	*14.34*	4, 7, 13, 16	2, 4, 7, 13, 16, 17, 18	
E-1-DF and E-11DF	B-1 Dryer Bag Filter	PM	1.54	*6.76*	4, 7, 8, 12, 13	2, 4, 7, 8, 10, 12, 13, 17, 18	
		SO_2	<0.01	*0.01*	4, 7, 13	2, 4, 7, 13, 17, 18	
		NO_X	0.38	*1.66*	4, 7, 13	2, 4, 7, 13, 17, 18	
		VOC	2.87	*12.58*	4, 7, 13	2, 4, 7, 13, 17, 18	
		CO	0.33	*1.43*	4, 7, 13	2, 4, 7, 13, 17, 18	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	tpy (4)	Special Condition	Special Condition	Special Condition
E-20-DF and E-21DF	B-2 Dryer Bag Filter	PM	1.54	*6.76*	4, 7, 8, 12, 13	2, 4, 7, 8, 10, 12, 13, 17, 18	
		SO_2	<0.01	*0.01*	4, 7, 13	2, 4, 7, 13, 17, 18	
		NO_X	0.38	*1.66*	4, 7, 13	2, 4, 7, 13, 17, 18	
		VOC	3.19	*13.97*	4, 7, 13	2, 4, 7, 13, 17, 18	
		CO	0.33	*1.43*	4, 7, 13	2, 4, 7, 13, 17, 18	
E-41-DF and E-41DF	B-4 Dryer Bag Filter	PM	1.54	*6.76*	4, 7, 8, 12, 13	2, 4, 7, 8, 10, 12, 13, 17, 18	
		SO_2	<0.01	*0.01*	4, 7, 13	2, 4, 7, 13, 17, 18	
		NO_X	0.38	*1.66*	4, 7, 13	2, 4, 7, 13, 17, 18	
		VOC	2.87	*12.58*	4, 7, 13	2, 4, 7, 13, 17, 18	
		CO	0.33	*1.43*	4, 7, 13	2, 4, 7, 13, 17, 18	
E-10CU	B-1 Clean-up Bag Filter	PM	0.51	*2.25*	4, 8, 12, 13	2, 4, 8, 10, 12, 13, 17, 18	
E-20CU	B-2 Clean-up Bag Filter	PM	0.51	*2.25*	4, 8, 12, 13	2, 4, 8, 10, 12, 13, 17, 18	
E-40CU	B-4 Clean-up Bag Filter	PM	0.51	*2.25*	4, 8, 12, 13	2, 4, 8, 10, 12, 13, 17, 18	
E-1VF	Furnace Vacuum Bag Filter	PM	0.38	*1.65*	4, 8, 12, 13	2, 4, 8, 10, 12, 13, 17, 18	
E-2VF	Furnace Vacuum Bag Filter	PM	0.43	*1.88*	4, 8, 12, 13	2, 4, 8, 10, 12, 13, 17, 18	
FURN-FUG	Furnace Area Fugitives (7)	PM	3.33	*14.6*	4, 12, 13	2, 4,12, 13, 17, 18	
		VOC	1.29	*5.64*	4, 13	2, 4, 13, 17, 18	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	tpy (4)	Special Condition	Special Condition	Special Condition
E-50R	Unit T1 Reactor (8)	PM	7.86	*20.04*	7, 8, 12, 13, 16	2. 7, 8, 10, 12, 13, 16, 17, 18	
		SO_2	0.69	*3.01*	7, 16	2, 7, 16, 17, 18	
		NO_X	5.8	*25.4*	7, 16	2, 7, 16, 17, 18	
		CO	12.5	*54.75*	7, 16	2, 7, 16, 17, 18	
E-51R	Unit T1 Reactor (8)	PM	7.86	*20.04*	7, 8, 12, 13, 16	2, 7, 8, 10, 12, 13, 16, 17, 18	
		SO_2	0.69	*3.01*	7, 16	2, 7, 16, 17, 18	
		NO_X	5.8	*25.4*	7, 16	2, 7, 16, 17, 18	
		CO	12.5	*54.75*	7, 16	2, 7, 16, 17, 18	
E-53P	TPE Bag Filter	PM	1.3	*5.69*	7, 8, 12, 13	2, 7, 8, 10, 12, 13, 17, 18	
		SO_2	2.75	*12.04*	7	2, 7, 17, 18	
		NO_X	23.2	*101.62*	7	2, 7, 17, 18	
		CO	50	*219*	7	2, 7, 17, 18	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Emission Point No. (1)
			lbs/hour	tpy (4)	Special Condition	Special Condition	Special Condition
E-5B	Thermal Boiler	PM	0.12	*0.55*	7, 12	2, 7, 12, 13, 17, 18	
		SO_2	0.01	*0.04*	7	2, 7, 17, 18	
		NO_X	1.64	*7.19*	7	2, 7, 17, 18	
		CO	1.38	*6.04*	7	2, 7, 17, 18	
		VOC	0.09	*0.4*	7	2, 7, 17, 18	
E-50DH	Thermal Dehumidifier Reactor No. 1 and No. 2	CO	2.94	*12.89*	7	2, 7, 17, 18	
E-51P	Thermal Bag filter Screw Vent	PM	0.02	*0.08*	8, 12, 13	2, 8, 10, 12, 13, 17, 18	
E-52P	Thermal Bag Filter Screw Vent	PM	0.02	*0.08*	8, 12, 13	2, 8, 10, 12, 13, 17, 18	
E-3VF	Thermal Product Storage/Loading Bag Filter	PM	0.86	*3.75*	8, 12, 13	2, 8, 10, 12, 13, 17, 18	
E-4VF	Thermal Clean-up Bag Filter	PM	0.09	*0.38*	8, 12, 13	2, 8, 10, 12, 13, 17, 18	
E-5VF	Thermal Clean-up Bag Filter	PM	0.09	*0.38*	8, 12, 13	2, 8, 10, 12, 13, 17, 18	
THERM-FUG	Thermal Area Fugitives (7)	PM	0.58	*2.56*	12, 13	2, 12, 13, 13, 17, 18	
E-10T	Oil Storage Tank No. 1	VOC	0.23	*0.53*	4	2, 4, 17, 18	
E-11T	Oil Storage Tank No. 2	VOC	0.17	*0.35*	4	2, 4, 17, 18	
E-12T	East Day Tank	VOC	0.02	*0.05*	4	2, 4, 17, 18	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Emission Point No. (1)
			lbs/hour	tpy (4)	Special Condition	Special Condition	Special Condition
E-13T	West Day Tank	VOC	0.02	*0.05*	4	2, 4, 17, 18	
E-22T	Day Tank No. 5	VOC	0.02	*0.06*	4	2, 4, 17, 18	
Oil-Fug	Oil Storage Fugitives (7)	VOC	0.25	*1.1*	4		
P-60P	Waste Heat Boiler Planned Startup, Tail gas Vent to Atmosphere-MSS (9)	PM	0.08	*<0.01*	16	2, 16, 17, 18, 19	
		SO_2	0.21	*<0.01*	16	2, 16, 17, 18, 19	
		NO_X	0.38	*<0.01*	16	2, 16, 17, 18, 19	
		VOC(6)	8.49	*0.13*	16	2, 16, 17, 18, 19	
		CO	143.72	*2.16*	16	2, 16, 17, 18, 19	
		H_2S	4.43	*0.07*	16	2, 16, 17, 18, 19	
		COS	0.34	*<0.01*	16	2, 16, 17, 18, 19	
		CS_2	1.51	*0.02*	16	2, 16, 17, 18, 19	
		HCN	0.63	*<0.01*	16	2, 16, 17, 18, 19	
		Bz	0.18	*<0.01*	16	2, 16, 17, 18, 19	
BAGFILTFUG	Bag Filter Change-out Fugitives-MSS (10)	PM	0.57	*0.01*	16	2, 16, 17, 18, 19	
BRICKFUG	Re-bricking Fugitives-MSS (11)	PM	2.1	*0.05*	16	2, 16, 17, 18, 19	

Notes:

(1) *Emission point identification - either specific equipment designation or emission point number from plot plan.*

(2) *Specific point source name. For fugitive sources, use area name or fugitive source name.*

(3)

VOC	-	*volatile organic compounds as defined in Title 30 Texas Administrative Code §101.1*
NO_x	-	*total oxides of nitrogen*
SO2	-	*sulfur dioxide*
PM	-	*total particulate matter, suspended in the atmosphere, including PM10 and PM2.5, as represented*
PM10	-	*total particulate matter equal to or less than 10 microns in diameter, including PM2.5, as represented*
PM_2		
PM_5	-	*particulate matter equal to or less than 2.5 microns in diameter*
CO	-	*carbon monoxide*
H_2S	-	*hydrogen sulfide*
COS	-	*carbonyl sulfide*
CS_2	-	*carbon disulfide*
HCN	-	*hydrogen cyanide*
BZ	-	*benzene*
Al	-	*aluminum*
Cl	-	*chlorine*
MSS	-	*planned maintenance, startup and shutdown*
EPN	-	*emission point number*

(4) *Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.*

(5) *The total combined annual emissions of all sources combusting tail gas shall not exceed these allowable emission rates. The short-term emission rates for each source are listed separately.*

(6) *VOC includes (but is not limited to) acetylene, COS, CS2, HCN and Bz.*

(7) *Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.*

(8) *Startup and shutdown emissions of products of natural gas combustion are captured in the emission rates for this source/EPN.*

(9) MSS emissions from the waste heat boiler startup do not occur simultaneously with production emissions and are captured by EPN E-6B.

(10) PM emissions from bagfilter change outs do not occur simultaneously with production emissions from the corresponding unit and are captured by the following corresponding unit EPNs: E-10FL, E-20FL, E-40FL, E-50R and E-51R.

(11) PM emissions from re-bricking are captured by EPNs E-10FL, E-20FL, E-40FL, E-50R and E-51R,. Production rate will be reduced to stay within the PM emission limits.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT

A Permit Is Hereby Issued To
Orion Engineered Carbons LLC
Authorizing the Continued Operation of
Carbon Black Plant
Located at **Borger, Hutchinson County, Texas**
Latitude 35° 39′ 58″ Longitude –101° 26′ 2″

Permits: 8780 and PSDTX416M1

Issuance Date : March 24, 2015

Expiration Date: March 24, 2025

For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code 116.116 (30 TAC 116.116)]
2. **Voiding of Permit**. A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1)the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of $5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC 116.120(a), (b) and (c)]
3. **Construction Progress**. Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC 116.115(b)(2)(A)]
4. **Start-up Notification**. The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC 116.115(b)(2)(B)(iii)]
5. **Sampling Requirements**. If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC 116.115(b)(2)(C)]

6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates**. The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC 116.115(b)(2)(F)]
9. **Maintenance of Emission Control**. The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with 30 TAC 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC 116.115(b)(2)(G)]
10. **Compliance with Rules**. Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to a condition of "air pollution" as defined in Texas Health and Safety Code (THSC) 382.003(3) or violate THSC 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.

Special Conditions

Permit Numbers 8780 and PSDTX416M1

1. This permit authorizes the continued operation of existing facilities and activities in support of a carbon black manufacturing (utilizing both furnace and thermal methods) plant located on Highway 1559 about a half mile north of State Highway 136 in Borger, Hutchinson County.

   A. This permit authorizes only those sources of emissions located at this site that, along with their emissions point numbers (EPNs), are listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT). The nature and rates of air contaminants authorized from each source/facility are limited to those listed in the MAERT for the named source/facility and its respective EPN.

   B. Planned maintenance, startup, and shutdown (MSS) activities and related emissions are authorized for the sources and activities described in and limited by the Special Conditions and MAERT of this permit. No other MSS activities and emissions are authorized by this permit for the facilities listed on the MAERT.

   C. This permit does not include the facilities at the site or the planned MSS activities associated with these facilities listed in Attachment I except as noted in the MAERT. These facilities are authorized under a Permit by Rule (PBR) by Title 30 Texas Administrative Code (30 TAC) Chapter 106 or are authorized as a De Minimis source by 30 TAC § 116.119. These lists are not intended to be all inclusive and can be altered at the site without modifications to this permit.

2. Within 180 days of the issuance date of this permit for existing, modified or reconstructed sources / facilities, and no later than the startup date of new sources / facilities, the holder of the permit shall physically identify and mark in a conspicuous location the EPN for each source listed in the MAERT. A listing containing the EPN and source/facility names shall be maintained at the site. Source/facility names shall be those established in this permit with the associated facility identification number (FIN) as established in the point source emissions inventory for the source. Fugitive emissions sources need not be labeled, but their location and the EPN for each shall be annotated on a current plot plan kept for that purpose. All of the sources will be marked in agreement with their identification on the plot plan submitted with the application for this permit dated December 30, 2009, as updated on March 4, 2011.

Federal Requirements

3. The relevant facilities authorized under this permit are subject to the applicable requirements of Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT standards) as follows:

   A. MACT Subpart A, General Provisions (40 CFR § 63.1 et seq.); and,

   B. MACT Subpart YY, Generic Maximum Achievable Control Technology Standards for Carbon Black Production (40 CFR § 63.1100 et seq.) and for the tail gas control

devices, Subpart SS, Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process (40 CFR § 63.980 et seq.) as applicable.

Operational Limitations

4. The carbon black oil feedstock feed rate for all reactors combined shall not exceed 96 gallons per minute and 50,457,600 gallons per year.

5. The total sulfur content of the carbon black feedstock is limited to 2.8 percent on annual basis and 3.0 percent on an hourly basis by weight as determined by American Society for Testing and Materials Method D 4294 or equivalent method approved by the permit holder and the appropriate Texas Commission on Environmental Quality (TCEQ) Regional Office. The annual average shall be calculated on a rolling 12-month basis. The sulfur content of the feedstock oil shall be based on the daily internal sulfur analysis of the feedstock going from the storage tank to the day tanks. Records must contain sufficient information to readily demonstrate compliance with the above sulfur limits.

   The analysis is not required on weekends and plant holidays if technicians capable of performing the analysis are not normally scheduled on those days provided the necessary samples are collected, and the analysis is performed on the next day technicians are available.

6. **Fuel Sources**

   A. Carbon black reactor tail gas shall be combusted in the Waste Heat Boiler (EPN E-6B), Flare (EPN E-10FL), Flare (EPN E-20FL), or Flare (EPN E-40FL).

   B. Fuel used in all other fired sources shall be limited to pipeline-quality, sweet natural gas as supplied by the gas company. Use of any other fuel requires authorization from the TCEQ.

7. All fabric filter collection and control devices that limit particulate matter emissions shall be operated and maintained in a manner consistent with the manufacturer's recommendations for the device or other written procedures for the proper operation and maintenance of each fabric filter. Copies of the manufacturers' recommended practices shall be kept on site and made available upon request of the TCEQ or any pollution control program representative with jurisdiction. A log shall be kept on-site which notes each device related maintenance and repair activities, the date of each inspection, name of the inspector, the purpose of the inspection, and the nature of any repairs and maintenance work performed.

8. Particulate matter waste collected from any fabric filter system shall be managed in such a manner to minimize fugitive emissions while the waste material remains on site. Good housekeeping shall be used to promptly clean up any spills of materials that could become airborne, such as carbon black, in order to minimize entrainment of the materials into the ambient air.

9. All baghouses shall have a maximum outlet grain loading of 0.01 grain/dry standard cubic feet.

10. Flares shall be designed and operated in accordance with the following requirements:

    A. The combined assist natural gas and waste stream to the flares shall meet the 40 CFR § 60.18 specifications of minimum hydrogen content and maximum tip velocity under normal, upset, and maintenance flow conditions. Compliance with this condition shall be demonstrated by testing required in section D below. Flare testing per 40 CFR § 60.18(f) may be requested by the appropriate TCEQ Regional Office to demonstrate compliance with this condition.

    B. The flares shall be operated with a flame present at all times and have a constant pilot flame. The pilot flame shall be monitored by a thermocouple or an infrared monitor and pilot flame monitoring.

    C. Opacity attributable to sulfur trioxide formation associated with the combustion of reduced sulfur compounds shall not exceed 10 percent.

    D. The flares shall be operated with no other visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Visible emissions from the flares that are due to carbon black leaks from the primary bagfilter are an indication of improper operation of the baghouse but are not an indication of improper design or operation of the flares.

    E. The holder of this permit shall perform testing per 40 CFR § 60.18(c)(3)(i) or approved equivalent to demonstrate the percent hydrogen in the waste stream to the flares on an annual basis. Records of all test results shall be maintained for five years and shall be made available to the Executive Director of the TCEQ upon request.

Visible Emissions and Opacity

11. Visible emissions and opacity related requirements that apply to the sources and emissions points authorized in this permit are as follows:

    A. Visible emissions for more than 15 seconds from any source or EPN not identified in Special Condition No. 11B shall be corrected immediately. Visible emissions lasting longer than 5 minutes shall be noted in the daily shift records including date, time, duration, location and corrective action taken.

    B. Visible emissions observations for the flares shall be conducted once per day and once per week for the waste heat boiler stack (EPN E-6B) and the T1 reactor stacks (EPNs E-50R and E-51R).

    The visible emissions observations shall be performed as follows. Observations shall be made at least 15 feet and no more than 0.25 miles from the emission point(s). Up to three emissions points may be read concurrently, provided that all three emissions points are within a 70 degree viewing sector or angle in front of the observer such that the proper sun position (i.e., at the observer's back) can be maintained for all

three emission points. Contributions from uncombined water shall not be included in determining compliance with this condition. Visible emissions observations shall be of at least 5 minutes duration for the flares, and 15 seconds for all other subject sources. Visible emissions observations shall be documented and recorded when they are conducted. The source shall be operating when the visible emissions observation is made.

(1) If visible emissions are observed at the flares for more than 5 minutes or for more than 12 seconds within a 15 second observation period for the stationary vents, then the following requirements also apply:

(a) An opacity observation shall be conducted for the EPN (except for flares) and documented in accordance with Test Method (TM) 9 of 40 CFR Part 60, Appendix A-4 (Method 9). The averaging period when conducting a TM 9 observation is six minutes. If visible emissions from any flare exceed 5 minutes in duration, the flare is in violation of visible emissions of this provision except as provided by Special Condition No. 10D. Opacity in excess of 10% for any other emission point referenced in this special condition (Special Condition No. 11B) constitutes a violation of the prohibition of visible emissions from the emissions point. If a violation has been identified then an evaluation of the source of the visible emissions and opacity, including an evaluation of the operating parameters of the source and any control systems governing the facility whose emission point is being observed for visible emissions shall be conducted and documented within 24 hours of the observation. Steps shall be taken immediately to minimize and restore, if possible, a condition of no visible emissions for the facility and EPN. The steps necessary for the restoration to a condition of operations with no visible emissions for the facility and EPN, shall be accomplished and documented by performance of a visible emissions observation within one week of first observation of visible emissions.

(b) The documentation of the evaluation of the source of the visible emissions shall include at least the date, time, and results of the visible emissions and opacity observations conducted. The documentation shall also include the cause of the visible emissions, the steps taken to restore the system to a condition of no visible emissions, including a description of any corrective action taken, the person or persons conducting the various observations and restoration activities, and the results of the visible emissions observation used to demonstrate that the system has been restored to a condition of no visible emissions.

(c) In the event that operations with no visible emissions are unable to be restored within the week of first observation of visible emissions, then Method 9 opacity observations, comprised of 10 six-minute observation periods, shall be conducted and documented each operating day until the source is restored to an operating condition of no visible emissions.

C. Visible emissions or opacity observations for any source authorized by this permit shall be made upon demand of a representative of the TCEQ or any air pollution control program with jurisdiction. When such observations are required, the methods used and the observation period duration shall be as specified in Special Condition No. 11B unless otherwise specified by the person requiring the observation to be conducted.

Continuous Demonstration of Compliance

12. Continuous compliance with the emission limits in the MAERT shall be demonstrated as follows:

A. The visible emissions observations and opacity requirements of Special Condition No. 11 shall be used to demonstrate ongoing compliance with emissions limitations of the MAERT for the flares, the waste heat boiler stack and the T1 reactor stack. Further, outlet grain loading limitations of Special Condition No. 9 and the monitoring requirements specified in Special Condition No. 10 shall be used to demonstrate ongoing compliance for baghouses and flares, respectively.

B. The oil feedstock rate limits of Special Condition No. 4 and the feedstock sulfur limits of Special Condition No. 5 shall be used to demonstrate ongoing compliance with the emission limits in the MAERT.

C. All enclosures, ductwork, and collection systems routing carbon black or tail gas originating in part or in whole from any furnace shall be effective in capturing emissions from the intended equipment and in preventing fugitive emissions. The duct and collection system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the emissions capture system. To the extent that design will allow, the exterior of all ventilation systems in this facility will be visually inspected on a daily basis by facility personnel. Visible leaks and cracks shall, with every reasonable effort, be mitigated as soon as possible and finally repaired within a week of detection. Inspections and repairs shall be documented as they occur. A log shall be kept on-site which notes each system or ductwork related maintenance and repair activities, the date of each inspection, name of the inspector, the purpose of the inspection, and the nature of any repairs and maintenance work performed.

D. Planned maintenance (re-bagging) on the particulate matter (PM) collection and control system shall be performed only during periods when the facilities generating the emissions controlled by the PM collection and control system are not in operation. Preventative maintenance, scheduled maintenance, and repairs performed on any abatement device shall be recorded as they occur.

Initial Determination of Compliance

13. Sampling ports and platforms shall be incorporated into the design of all exhaust stacks according to the specifications set forth in the enclosure entitled “Chapter 2, Stack

Sampling Facilities" before testing. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Director.

14. The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Waste Heat Boiler (EPN E-6B). The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate U.S. Environmental Protection Agency (EPA) Test Methods.

    A. The TCEQ Amarillo Regional Office shall be contacted as soon as testing is scheduled, but not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:

        (1) Date for pretest meeting.

        (2) Date sampling will occur.

        (3) Name of firm conducting sampling.

        (4) Type of sampling equipment to be used.

        (5) Method or procedure to be used in sampling.

        (6) Procedure used to determine dryer and pre-heater loads during and after the sampling period.

        The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports. A written proposed description of any deviation from sampling procedures specified in permit conditions, the TCEQ or the EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures. Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate / equivalent procedure proposals for New Source Performance Standards testing which must have the EPA approval shall be submitted to the TCEQ Office of Compliance and Enforcement, Program Support Section, Air and Waste Team in Austin.

    B. Air contaminants emitted from the waste heat boiler and pre-heater to be tested for include (but are not limited to) nitrogen oxides, carbon monoxide, sulfur dioxide, and PM.

    C. Sampling shall occur within 120 days after issuance of the modified permit. Additional sampling will occur within 120 days after a sufficient portion of the defined modification has been completed to enable the facility to operate at feedstock rates greater than 110 percent of that at which tests were conducted. Sampling may also occur at such other times as may be required by the Executive Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the

TCEQ Regional Office. Additional time to comply with the applicable requirements of 40 CFR Part 60 and 40 CFR Part 61 requires the EPA approval, and requests shall be submitted to the TCEQ Office of Compliance and Enforcement, Program Support Section, Air and Waste Team in Austin.

D. The plant shall operate at maximum production rates during stack emission testing. Primary operating parameters that enable determination of production rate shall be monitored and recorded during the stack test. These parameters shall be determined at the pretest meeting and shall be stated in the sampling report. If the plant is unable to operate at maximum rates during testing, then future production rates may be limited to the rates established during testing. Additional stack testing may be required when higher production rates are achieved.

E. Two copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Amarillo Regional Office.
One copy to the Central File Room, Austin.

F. Initial performance testing for the waste heat boiler (EPN E-6B) was completed in December 2002. Additional performance testing for the waste heat boiler was completed in February 2005.

15. **Additional Authorized Planned MSS Specific Activities**

A. The authorized planned MSS activities that result in various emissions are as follows:

Table 1: Planned MSS Specific Activity Limits

Planned MSS Activity	Allowable No. of Activities or Hours per Year
Reactor and combustion device startup	720 hours
Tail gas purge for waste heat boiler startup	30 hours
Bag filter change-out	10,000 bags replaced
Refractory brick cutting and cement mixing	1500 bricks cut

B. Work practices will be developed, implemented, and documented that are designed to minimize air contaminant emissions during each of these authorized MSS activities by limiting the duration of exposure of contaminants to atmosphere while the activities are underway and storing the spent materials, where possible, in closed containers until properly disposed of. The developed work practices shall be modified by the permit holder as found appropriate and maintained current in written form.

C. The methods used to estimate the emissions for each of the activities listed in this Special Condition are those based on the permit application dated December 30,

2009 as updated on March 4, 2011. The permit holder shall retain the calculation methods and example calculations for the life of the permit. An evaluation of the emissions factors developed will be conducted and documented by the permit holder annually, and if necessary, updated by permit alteration or amendment, as appropriate.

D. Documentation of planned authorized MSS activities shall include at least the following:

(1) The process unit at which emissions from the MSS activity occurred, including the emission point number and common name of the process unit;

(2) The type of planned MSS activity and the reason for the planned activity;

(3) The common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;

(4) The date and time of the MSS activity and its duration; and

(5) The estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.

All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis.

Recordkeeping

16. General Condition No. 7 regarding information and data to be maintained on file is supplemented as follows and shall be used to demonstrate compliance with the requirements of the Special Conditions of the permit and the MAERT. Also, these records and logs shall be retained for at least five years on-site at the Borger plant.

A. Daily records of carbon black oil feedstock reactor feed rate to demonstrate compliance with Special Condition No. 4.

B. Records of sulfur content of the carbon black feedstock to demonstrate compliance with Special Condition No. 5.

C. Records in sufficient detail to demonstrate compliance with Special Condition No. 6 for combustion sources. Also, daily records of tail gas combusted in the waste heat boiler and flares (based on mass and energy balance).

D. Records in sufficient detail to demonstrate compliance with Special Condition Nos. 7, 8, 9 and 12D for fabric filter system.

E. Records demonstrating compliance with flares required in Special Condition No. 10.

F. Field records of any visible emissions and opacity observations, along with any corrective actions taken, as required under Special Condition No. 11.

G. Records of any performance tests conducted in accordance with Special Condition No. 14 shall be retained for the life of the unit.

H. Records of all planned maintenance, startup, and shutdown activities conducted in accordance with Special Condition No. 15 of this permit. The planned MSS activity records shall at least contain the information required in Special Condition No. 15.

17. Demonstration of compliance with permit Special Conditions and MAERT limitations shall be as follows:

A. Unless otherwise noted in the individual special conditions of this permit, compliance with the limitations in the MAERT shall be demonstrated at least monthly for each source using the records identified in Special Condition No. 16 as follows:

(1) For sources with hourly emission limitations, compliance with pound per hour MAERT limits shall be based on data recorded daily and calculations shall be updated monthly.

(2) For sources with annual MAERT limitations whose method of calculation is not otherwise specified, the annual emissions shall be based on a rolling 12 month emissions total that is calculated using the most recent monthly totals calculated in Special Condition No 17A.

B. For sources with daily, hourly, or annual usage limitations, monthly records shall be maintained to demonstrate compliance with the respective limitations. Compliance with annual usage limitations shall be on a 12 month rolling basis.

C. Examples of all calculations and the basis of all assumptions used to demonstrate compliance with any limitation or standard required in this permit shall be kept for at least five years and made available upon demand of the TCEQ or representative of any air pollution control program with jurisdiction.

18. With the exception of the MAERT emission limits, the planned maintenance startup and shutdown permit conditions become effective 180 days after the June 17, 2011 MSS permit amendment has been issued. Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the quantity of air contaminants to be emitted shall be recorded.

Permits by Rule Authorizations

19. The following facilities at the site are authorized by permits by rule (PBR) under 30 TAC Chapter 106. These authorizations are listed here for reference purposes only.

EPNs	Registration Number	Rule Number
FURN FUG and OIL FUG	91592	106.261 and 106.262
E-10CU/B1, E-6VF/B1, OIL-FUG2, E-14T	114508	106.144, 106.264, and 106.472
E-10T, E-11T, E-12T, E-13T, E-22T	NA	106.472

Dated: March 24, 2015

Attachment I
Planned MSS Activities and Authorizations for Permit Nos. 8780 and PSDTX416M1

Facility Description	Emission Point Location	Registration Number/Date	Rule Citation (30 TAC)
Manual application (hand wipe cleaning) of cleaning solvents containing less than 1% VOC	Sitewide	De minimis	§116.119(a)(1)
Aerosol solvent and lubricants usage	Sitewide	De minimis	§116.119(a)(1)
Application of coatings less than 100 gallons per year	Sitewide	De minimis	§116.119(a)(2)
Application of solvents less than 50 gallons per year	Sitewide	De minimis	§116.119(a)(2)
Comfort heating	Sitewide	09/04/2000	§106.102
Air conditioning and ventilation systems	Sitewide	09/04/2000	§106.103
Bench scale laboratory equipment	Sitewide	09/04/2000	§106.122
Vacuum producing devices for laboratory use	Sitewide	09/04/2000	§106.123
Boilers, heaters and other combustion devices	Sitewide	09/04/2000	§106.183
Welding/Cutting/Brazing	Sitewide	09/04/2000	§106.227
Ovens, Barbeque pits and cookers	Sitewide	09/04/2000	§106.244
Repairs and Maintenance	Sitewide	11/01/2001	§106.263
Replacement of facilities	Sitewide	09/04/2000	§106.264
Hand-held and manually operated machines	Sitewide	09/04/2000	§106.265
Vacuum cleaning systems	Sitewide	09/04/2000	§106.266
Cooling water units	Sitewide	09/04/2000	§106.371
Fuel dispensing	Sitewide	09/04/2000	§106.412
Remote reservoir parts washers	Maintenance Shop	11/01/2001	§106.454
Liquid loading and unloading	Sitewide	03/14/1997	§106.472
Organic liquid loading and unloading	Sitewide	09/04/2000	§106.473
Portable and emergency engines and turbines	Sitewide	09/04/2000	§106.511
Water and wastewater treatment	Sitewide	09/04/2000	§106.532
General facilities/fugitive components	Sitewide	91592 01/29/2010	§106.261 and §106.262

Dated: March 24, 2015

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 8780 and PSDTX416M1

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
E-6B	Waste Heat Boiler	PM	24.34	(5)
		PM_{10}	14.61	(5)
		$PM_{2.5}$	10.47	(5)
		SO_2	2073.60	(5)
		NO_x	169.78	(5)
		VOC (6)	24.89	(5)
		CO	853.69	(5)
		H_2S	18.73	(5)
		COS	4.94	(5)
		CS_2	7.39	(5)
		HCN	1.54	(5)
		BZ	0.83	(5)
		Al	0.67	(5)
		Cl	0.87	(5)
E-10FL	Unit 1 Reactor / Flare (7)	PM	9.13	(5)
		PM_{10}	5.48	(5)
		$PM_{2.5}$	3.93	(5)
		SO_2	777.60	(5)
		NO_x	62.82	(5)
		VOC (6)	9.33	(5)
		CO	320.13	(5)
		H_2S	7.02	(5)
		COS	1.85	(5)

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		CS_2	2.77	(5)
		HCN	0.58	(5)
		BZ	0.31	(5)
		Al	0.25	(5)
		Cl	0.33	(5)
E-20FL	Unit 2 Reactor / Flare (7)	PM	9.13	(5)
		PM_{10}	5.48	(5)
		$PM_{2.5}$	3.93	(5)
		SO_2	777.60	(5)
		NO_x	62.82	(5)
		VOC (6)	9.33	(5)
		CO	320.13	(5)
		H_2S	7.02	(5)
		COS	1.85	(5)
		CS_2	2.77	(5)
		HCN	0.58	(5)
		BZ	0.31	(5)
		Al	0.25	(5)
		Cl	0.33	(5)
E-40FL	Unit 4 Reactor / Flare (7)	PM	9.13	(5)
		PM_{10}	5.48	(5)
		$PM_{2.5}$	3.93	(5)
		SO_2	777.60	(5)
		NO_x	62.82	(5)
		VOC (6)	9.33	(5)
		CO	320.13	(5)
		H_2S	7.02	(5)

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		COS	1.85	(5)
		CS_2	2.77	(5)
		HCN	0.58	(5)
		BZ	0.31	(5)
		Al	0.25	(5)
		Cl	0.33	(5)
Emissions Cap	Combined Sources of Tail Gas (5)	PM	---	78.44
		PM_{10}	---	47.07
		$PM_{2.5}$	---	33.73
		SO_2	---	8476.88
		NO_x	---	688.14
		VOC (6)	---	101.07
		CO	---	3577.04
		H_2S	---	76.56
		COS	---	20.19
		CS_2	---	30.20
		HCN	---	6.27
		BZ	---	3.03
		Al	---	1.93
		Cl	---	2.50
E-10D/E-11D	B-1 Dryers (19 MMBtu/hr)	PM	0.30	1.30
		PM_{10}	0.18	0.78
		$PM_{2.5}$	0.13	0.56
		SO_2	0.02	0.10
		NO_x	3.80	16.64
		VOC	0.21	0.94
		CO	3.27	14.34

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
E-20D/E-21D	B-2 Dryers (19 MMBtu/hr)	PM	0.30	1.30
		PM_{10}	0.18	0.78
		$PM_{2.5}$	0.13	0.56
		SO_2	0.02	0.10
		NO_x	3.80	16.64
		VOC	0.21	0.94
		CO	3.27	14.34
E-40D/E-41D	B-4 Dryers (19 MMBtu/hr)	PM	0.30	1.30
		PM_{10}	0.18	0.78
		$PM_{2.5}$	0.13	0.56
		SO_2	0.02	0.10
		NO_x	3.80	16.64
		VOC	0.21	0.94
		CO	3.27	14.34
E-10DF and E-11DF	B-1 Dryer Bag Filter	PM	1.54	6.76
		PM_{10}	0.93	4.05
		$PM_{2.5}$	0.66	2.91
		SO_2	< 0.01	0.01
		NO_x	0.38	1.66
		VOC	2.87	12.58
		CO	0.33	1.43
E-20DF and E-21DF	B-2 Dryer Bag Filter	PM	1.54	6.76
		PM_{10}	0.93	4.05
		$PM_{2.5}$	0.66	2.91
		SO_2	< 0.01	0.01
		NO_x	0.38	1.66
		VOC	3.19	13.97

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		CO	0.33	1.43
E-41P and E-41DF	B-4 Dryer Bag Filter	PM	1.54	6.76
		PM_{10}	0.93	4.05
		$PM_{2.5}$	0.66	2.91
		SO_2	< 0.01	0.01
		NO_x	0.38	1.66
		VOC	2.87	12.58
		CO	0.33	1.43
E-10CU	B-1 Clean Up Bag Filter / Loop Vent Filter	PM	0.51	2.25
		PM_{10}	0.31	1.35
		$PM_{2.5}$	0.22	0.97
E-20CU	B-2 Clean Up Bag Filter	PM	0.51	2.25
		PM_{10}	0.31	1.35
		$PM_{2.5}$	0.22	0.97
E-40CU	B-4 Clean Up Bag Filter	PM	0.51	2.25
		PM_{10}	0.31	1.35
		$PM_{2.5}$	0.22	0.97
E-1VF	Furnace Vacuum Bag Filter	PM	0.38	1.65
		PM_{10}	0.23	0.99
		$PM_{2.5}$	0.16	0.71
FURN-FUG	Furnace Area Fugitives (8)	PM	3.33	14.60
		PM_{10}	2.00	8.76
		$PM_{2.5}$	1.43	6.28
		VOC	0.09	0.38
E-50R	Thermal Unit 1 Reactor (7)	PM	7.86	20.04
		PM_{10}	4.71	12.02
		$PM_{2.5}$	3.38	8.62

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		SO_2	0.69	3.01
		NO_x	5.80	25.40
		CO	12.50	54.75
E-51R	Thermal Unit 1 Reactor (7)	PM	7.86	20.04
		PM_{10}	4.71	12.02
		$PM_{2.5}$	3.38	8.62
		SO_2	0.69	3.01
		NO_x	5.80	25.40
		CO	12.50	54.75
E-53P	Thermal Puff Eliminator (TPE) Bag Filter	PM	1.30	5.69
		PM_{10}	0.78	3.42
		$PM_{2.5}$	0.56	2.45
		SO_2	1.37	6.02
		NO_x	23.20	101.62
		CO	50.00	219.00
E-5B	Thermal Boiler	PM	0.12	0.55
		PM_{10}	0.12	0.55
		$PM_{2.5}$	0.12	0.55
		SO_2	< 0.01	0.04
		NO_x	1.64	7.19
		CO	1.38	6.04
		VOC	0.09	0.40
E-50DH	Thermal Dehumidifier Reactor Unit 1	CO	2.94	12.89
E-51P	Thermal Bag Filter Screw Vent Filter	PM	0.02	0.08
		PM_{10}	0.01	0.05
		$PM_{2.5}$	< 0.01	0.03

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
E-4VF	Thermal Cleanup Bag Filter	PM	0.09	0.38
		PM_{10}	0.05	0.23
		$PM_{2.5}$	0.04	0.16
E-5VF	Thermal Cleanup Bag Filter	PM	0.09	0.38
		PM_{10}	0.05	0.23
		$PM_{2.5}$	0.04	0.16
THERM-FUG	Thermal Area Fugitives (8)	PM	0.29	1.28
		PM_{10}	0.18	0.77
		$PM_{2.5}$	0.13	0.55
OIL-FUG	Oil Storage Fugitives (8)	VOC	0.16	0.68
P-60P	Waste Heat Boiler Planned Startup, Tail Gas Vent to Atmosphere - MSS (9)	PM	0.08	< 0.01
		PM_{10}	0.05	< 0.01
		$PM_{2.5}$	0.03	< 0.01
		SO_2	0.21	<0.01
		NO_x	0.38	< 0.01
		VOC (6)	8.49	0.13
		CO	143.72	2.16
		H_2S	4.43	0.07
		COS	0.34	< 0.01
		CS_2	1.51	0.02
		HCN	0.63	< 0.01
		BZ	0.18	< 0.01
BAGFILTFUG	Bag Filter Change-out Fugitives - MSS (10)	PM	0.57	< 0.01
		PM_{10}	0.34	< 0.01
		$PM_{2.5}$	0.24	< 0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
BRICKFUG	Re-bricking Fugitives-MSS (11)	PM	2.10	0.05
		PM_{10}	2.10	0.05
		$PM_{2.5}$	0.53	0.01

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
H_2S - hydrogen sulfide
COS - carbonyl sulfide
CS_2 - carbon disulfide
HCN - hydrogen cyanide
BZ - benzene
Al - aluminum
Cl - chlorine
MSS - planned maintenance, startup and shutdown
EPN - emission point number
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) The total combined annual emissions of all sources combusting tail gas shall not exceed these allowable emission rates. The short-term emission rates for each source are listed separately. Short term and annual emission rates of natural gas combustion during startup and/or shutdown are authorized in the tail gas combustion cap in NSR Permit No. 8780.
(6) VOC includes (but is not limited to) acetylene (C_2H_2), COS, CS_2, HCN and BZ.
(7) Startup and shutdown emissions of products of natural gas combustion are captured in the emission rates for this source / EPN.
(8) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(9) MSS emissions from the waste heat boiler startup do not occur simultaneously with production emissions and are captured by EPN E-6B.
(10) $PM/PM_{10}/PM_{2.5}$ emissions from bagfilter changeouts do not occur simultaneously with production emissions from the corresponding unit and are captured by the following corresponding unit EPNs: E-10FL, E-20FL, E-40FL, E-50R, and E-51R
(11) $PM/PM_{10}/PM_{2.5}$ emissions from re-bricking are captured by EPNs E-10FL, E-20FL, E-40FL, E-50R, and E-51R. Production rate will be reduced to stay within the $PM/PM_{10}/PM_{2.5}$ emission limits.

Date: March 24, 2015